

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
16 August 2001 (16.08.2001)

PCT

(10) International Publication Number
WO 01/59275 A2

(51) International Patent Classification⁷: F02B 37/00

(21) International Application Number: PCT/US01/04394

(22) International Filing Date: 8 February 2001 (08.02.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/181,489 10 February 2000 (10.02.2000) US

(71) Applicant: INTERNATIONAL TRUCK AND ENGINE CORPORATION [US/US]; Suite 1300, 455 North Cityfront Plaza Drive, Chicago, IL 60611 (US).

(72) Inventors: ISAAC, Emad, S.; 1220 Golf View Drive, Woodridge, IL 60517 (US). BERNHARDT, John, E.; 9128 S. Ridgeway Avenue, Evergreen Park, IL 60805 (US). MCNULTY, Michael, J.; 424 Dartmouth Lane, Schaumburg, IL 60193 (US).

(74) Agents: SULLIVAN, Dennis, Kelly et al.; Suite 1300, 455 North Cityfront Plaza Drive, Chicago, IL 60611 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

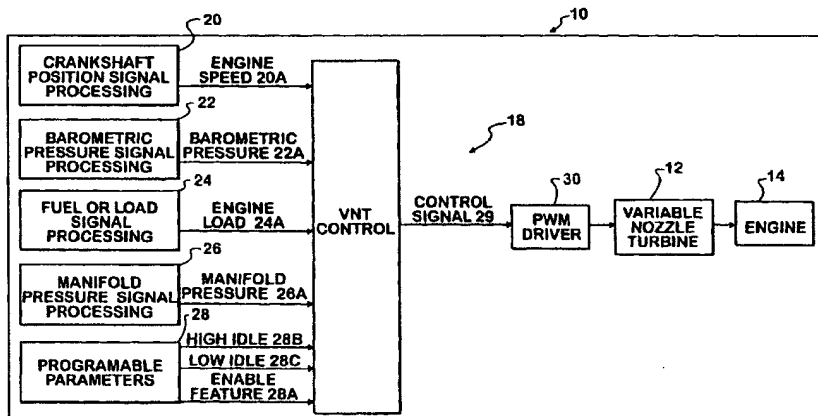
(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: VARIABLE NOZZLE TURBINE CONTROL STRATEGY



(57) Abstract: A variable nozzle turbocharger (12) creates engine boost. Boost is controlled by controlling the position of vanes within turbocharger. A processor develops a control signal (29) for controlling vane position. The processor develops a value for desired boost and processes that value with a value corresponding to the amount of boost being created by the turbocharger to generate error data (48A) defining error between the amount of boost being created by the turbocharger and the desired boost, and the processor develops a component of the control signal by P-LI-D processing (62) of the error data. Other components of the control signal are a feed-forward value from a look-up table (34) and a value from an overspeed protection function (60).

WO 01/59275 A2